



NeuroSpine's Greatest Strength is our Integrated Approach

The NeuroSpine Center of Wisconsin is recognized as among the best in spine and brain care in the Midwest and is acknowledged as the leader in neurospine care in the region.

With our unique integrated approach, surgeons and physiatrists work as a unified team, providing same-day coordinated consults. From diagnostic testing including X-ray, to physical therapy, to on-site MRI, to therapeutic injections, care remains patient-focused in a single convenient location.

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Back TO Life

Back to Life was developed specifically for chiropractors, worker's compensation case managers, physical therapists, occupational therapists, athletic trainers and personal trainers to provide a better understanding of **NeuroSpine's integrated approach** to back pain.

We want to hear from you!

Is there a topic you want to see in "Back to Life"? Do you have questions about our services? Would you like to refer a patient to one of our physicians? Call us at 920-882-8200 or 888-231-5236, or visit www.neurospinewi.com.

Be assured your patient will be referred back to you after we treat his/her condition.



Microdiscectomy (Microdecompression)



By Peter F. Ullrich, Jr., MD

In a microdiscectomy or a microdecompression, a small portion of the bone over the nerve root and/or disc material from under the nerve root is removed to relieve neural impingement and provide more room for the nerve to heal. A microdiscectomy is typically performed for lumbar herniated disc.

Microdiscectomy Helps Leg Pain

This procedure is usually recommended for patients who have experienced leg pain for four to six weeks and who have tried conservative treatment (such as oral steroids, epidural steroid injections, NSAID's and physical therapy) without successfully relieving the pain. However, it is not advisable to wait too long before having this surgery because the results are not as good if the surgery is postponed more than three months. Besides time, one needs to also factor in the level of the pain and the amount of disability the patient is experiencing. If the symptoms are mild, a longer course of conservative treatment may be reasonable, whereas if the symptoms are severe more immediate surgery is reasonable.

Microdiscectomy Procedure

A microdiscectomy is performed through a small (1 inch to 1 1/2 inch) incision in the midline of the low back.

- First, the back muscles (erector spinae) are lifted off the bony arch (lamina) of the spine. Since these back muscles run vertically, they can be moved out of the way rather than cut.
- The surgeon is then able to enter the spine by removing a membrane over the nerve roots (ligamentum flavum) and uses either operating glasses (loupes) or an operating microscope to visualize the nerve root.
- Often, a small portion of the inside facet joint is removed both to facilitate access to the nerve root and to relieve pressure over the nerve.
- The nerve root is then gently moved to the side and the disc material is removed from under the nerve root.

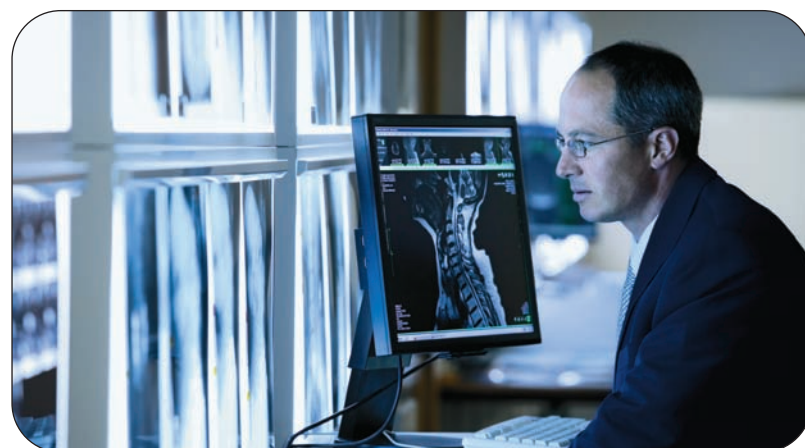
Importantly, since almost all of the joints, ligaments and muscles are left intact, a microdiscectomy does not change the mechanical structure of the patient's lower spine (lumbar spine).

When to Have a Microdiscectomy

In general, if a patient's leg pain due to a disc herniation is going to get better, it will do so in about six to twelve weeks. As long as the pain is tolerable and the patient can function adequately, it is usually advisable to postpone back surgery for a short period of time to see if the pain will resolve with conservative (non-surgical) treatment alone.

If the leg pain does not get better with conservative treatments, then a microdiscectomy is a reasonable option to relieve pressure on the nerve root and speed the healing. Immediate spine surgery is only necessary in cases of bowel/bladder incontinence (cauda equina syndrome) or progressive neurological deficits. It may also be reasonable to consider back surgery acutely if the leg pain is severe.

Microdiscectomy is typically recommended for patients who have experienced leg pain for at least six weeks and have not found sufficient pain relief with conservative treatment (such as oral steroids, NSAID's and physical therapy). However, after three months, the results of the spine surgery are not quite as favorable, so it is not generally advisable to postpone microdiscectomy for a prolonged period of time (more than three months).



After a Microdiscectomy

Usually, a microdiscectomy is performed on an outpatient basis (with no overnight stay in the hospital) or with one overnight in the hospital. Post-operatively, patients may return to a normal level of daily activity quickly.

Some spine surgeons restrict a patient from bending, lifting or twisting for the first six weeks following surgery. However, since the patient's back is mechanically the same, it is also reasonable to return to a normal level of functioning immediately following a microdiscectomy. There have been a couple of reports in the medical literature showing that immediate mobilization (return to normal activity) does not lead to an increase in recurrent lumbar herniated disc.

Microdiscectomy Success Rate

The success rate for a microdiscectomy is approximately 90% to 95%, although 5% to 10% of patients will develop a recurrent disc herniation at some point in the future.

A recurrent disc herniation may occur directly after back surgery or many years later, although they are most common in the first three months after surgery. If the disc does herniate again, generally a revision microdiscectomy will be just as successful as the first operation. However, after a recurrence, the patient is at higher risk of further recurrences (15 to 20% chance).

For patients with multiple herniated disc recurrences, a spine fusion surgery may be recommended to prevent further recurrences. Removing the entire disc space and fusing the level is the most common way to absolutely assure that no further disc herniations can occur. If the posterior facet joint is not compromised and other criteria are met, an artificial disc replacement may be considered.

Recurrent herniated discs are not thought to be directly related to a patient's activity and probably have more to do with the fact that within some disc spaces there are multiple fragments of disc that can come out at a later date. Unfortunately, through a posterior microdiscectomy approach, only about 30% of the disc space can be removed and most of the disc space cannot be visualized. Also, the hole in the disc space where the disc herniation occurs (annulotomy) probably never closes because the disc itself does not have a blood supply. Without a blood supply, the area does not heal or scar over. There also is no way to surgically repair the annulus (outer portion of the disc space).

Following a microdiscectomy, an exercise program of stretching, strengthening and aerobic conditioning is recommended to help prevent recurrence of back pain or disc herniation.

Microdiscectomy Risks and Complications

As with any form of spine surgery, there are several risks and complications that are associated with a microdiscectomy procedure, including:

- Dural tear (cerebrospinal fluid leak)—This occurs in 1% to 2% of these surgeries and does not change the results of surgery, but post-operatively the patient may be asked to lay recumbent for one to two days to allow the leak to seal.
- Nerve root damage
- Bowel/bladder incontinence
- Bleeding
- Infection

However, the above complications for a microdiscectomy are quite rare.

FOOTNOTE

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